

Mike Parks, Traffic Supervisor
TIPPECANOE COUNTY



HIGHWAY DEPARTMENT

Crash Analysis

Crash Data Use

- Project planning and prioritization
- Design needs and hazard identification
- Traffic Studies and investigations
- Complaints, requests, and concerns
- Infrastructure damage restitution

Tippecanoe County 5-Year Reported Crash Averages

7,030 Crashes annually

660 Occur on county roadways (9.4%)

125 Reports with injury (18.9%)

140 Collisions with deer (21.2%)

Leading Manner of Collision –

Ran Off Road (30%)

Record Keeping and Data Formats

- ISP online database – ARIES
- Access database (ARIES download)
- Excel spreadsheets

Yearly spreadsheet of all reports

5 Year spreadsheet on county roadways only

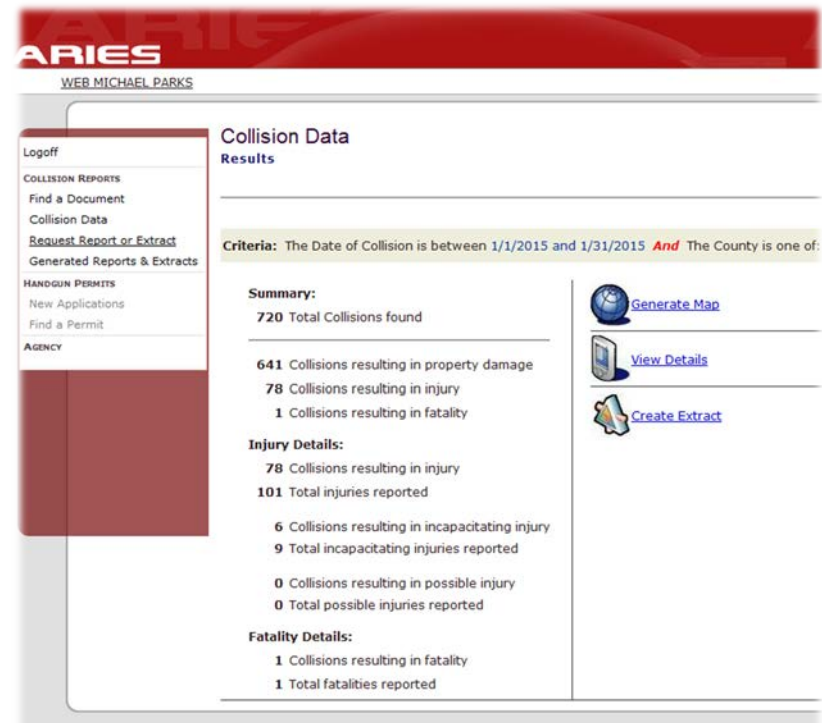
ARIES

Automated Reporting Information Exchange System

<https://www.ariesportal.com/Public/Home.aspx>

Collision Data

- “Show All”
- The Date of Collision (range)
- The County (Agency)
- *Property / Operand / Value*



The screenshot shows the ARIES web portal interface. At the top is a red header with the 'ARIES' logo and the user name 'WEB MICHAEL PARKS'. Below the header is a navigation menu on the left with links for 'Logoff', 'COLLISION REPORTS' (including 'Find a Document', 'Collision Data', and 'Request Report or Extract'), 'HANDGUN PERMITS' (including 'New Applications' and 'Find a Permit'), and 'AGENCY'. The main content area is titled 'Collision Data Results'. It displays search criteria: 'The Date of Collision is between 1/1/2015 and 1/31/2015 And The County is one of:'. Below this is a 'Summary' section showing: 720 Total Collisions found, 641 Collisions resulting in property damage, 78 Collisions resulting in injury, and 1 Collisions resulting in fatality. To the right of the summary are three icons with links: 'Generate Map', 'View Details', and 'Create Extract'. Below the summary is an 'Injury Details' section showing: 78 Collisions resulting in injury, 101 Total injuries reported, 6 Collisions resulting in incapacitating injury, 9 Total incapacitating injuries reported, 0 Collisions resulting in possible injury, and 0 Total possible injuries reported. At the bottom is a 'Fatality Details' section showing: 1 Collisions resulting in fatality and 1 Total fatalities reported.

ARIES
WEB MICHAEL PARKS

Collision Data Results

Criteria: The Date of Collision is between 1/1/2015 and 1/31/2015 **And** The County is one of:

Summary:

- 720 Total Collisions found
- 641 Collisions resulting in property damage
- 78 Collisions resulting in injury
- 1 Collisions resulting in fatality

Injury Details:

- 78 Collisions resulting in injury
- 101 Total injuries reported
- 6 Collisions resulting in incapacitating injury
- 9 Total incapacitating injuries reported
- 0 Collisions resulting in possible injury
- 0 Total possible injuries reported

Fatality Details:

- 1 Collisions resulting in fatality
- 1 Total fatalities reported

[Generate Map](#)
[View Details](#)
[Create Extract](#)

ARIES

Collision Data – Data Extract

Microsoft Access File

The screenshot shows a web-based form titled "Collision Data Data Extract". On the left is a sidebar menu with various options. The main content area has a header "Collision Data Data Extract" and a criteria field stating "Criteria: The Date of Collision is between 1/1/2015 and". Below this, there is a section "Specify the type of file to create:" with three radio button options: "Microsoft Access" (selected), "XML", and "Tab delimited text file". Another section "Optionally specify additional information to include with:" has three checked checkboxes: "Individual", "Unit", and "Officer's Narrative". At the bottom are "Submit" and "Cancel" buttons.

Collision Data
Data Extract

Criteria: The Date of Collision is between 1/1/2015 and

Specify the type of file to create:

☒ Microsoft Access
☐ XML
☐ Tab delimited text file
☐ Comma delimited text file

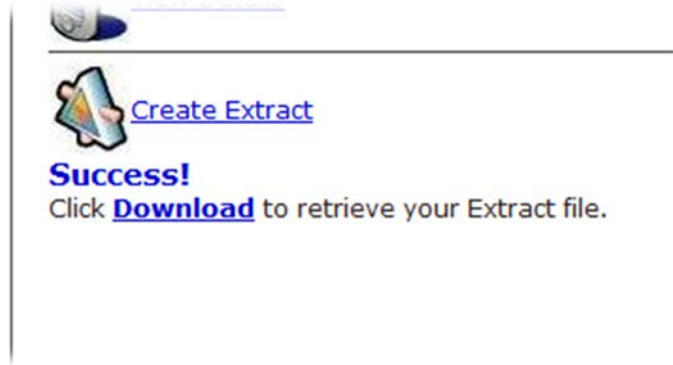
Optionally specify additional information to include with:

☒ Individual
☒ Unit
☒ Officer's Narrative

Submit Cancel

- Individual
- Unit
- Officer's Narrative

ARIES



- Run VCRS Zip .exe file
- SmartScreen Filter Warning – *Run anyway*
- UnZip – *Continue*, Select Location to Save File

Extract 20150311...

Extract – Access 2000 file format

Tables

- **Collision** – where, when, and how
- **Individual** – Driver information, injury status, drug and alcohol
- **Unit** – vehicle information

Master Record Number

Excel Spreadsheet Application

Access Tables – Copied into Worksheets

Combine columns:

- Roadway Names and Numbers
- Intersecting Road Names and Numbers

Roadway Name Uniformity

Identify Jurisdiction by Location

2015 Crash Data - Excel Spreadsheet

Clipboard		Font		Alignment		Number		Styles		Cells		Editing	
A1		Roadway Name											
	A	B	C	D	E	F	G	H	I	J	K		
1	Roadway Name	Roadway Suffix	Intersecting Road	Feet From	Direction	House Number	Master Record Number	Agency	Local Code	County	Township		
2	US231	HWY	TEAL	3700	N		902365603	LAFAYETTE PD	2015000009	TIPPECANOE	FAIRFIELD		
3	MAIN	ST	24TH	10	S		902365604	LAFAYETTE PD	2015000010	TIPPECANOE	FAIRFIELD		
4	UNKNOWN	ST	UNKNOWN				902368292	TIPPECANOE SD	2015000005	TIPPECANOE	WABASH		
5	BRADY	LN		20	S		902365605	LAFAYETTE PD	2015000012	TIPPECANOE	FAIRFIELD		
6	SAGAMORE	PKY				1600	902363740	WEST LAFAYETTE PD	2015000011	TIPPECANOE	WABASH		
7	CONCORD	RD	VETERANS MEMORIAL				902365607	LAFAYETTE PD	2015000018	TIPPECANOE	WEA		
8	COLUMBIA	ST				1104	902365608	LAFAYETTE PD	2015000020	TIPPECANOE	FAIRFIELD		
9	RADCLIFF	CT	MULLIGAN	40	N		902366239	LAFAYETTE PD	2015000021	TIPPECANOE	WEA		
10	S 23RD	ST	LAMB				902365609	LAFAYETTE PD	2015000023	TIPPECANOE	FAIRFIELD		
11	CR450E	RD	ZANIK	330	N		902368499	TIPPECANOE SD	2015000010	TIPPECANOE	WEA		
12	POINT WEST	DR	KLONDIKE	300	W		902368500	TIPPECANOE SD	2015000012	TIPPECANOE	WABASH		
13	N 4TH	ST	COLUMBIA				902365610	LAFAYETTE PD	2015000034	TIPPECANOE	FAIRFIELD		
14	N 4TH	ST	MAIN				902365612	LAFAYETTE PD	2015000037	TIPPECANOE	FAIRFIELD		
15	US52	HWY	CR900S	1300	N		902368501	TIPPECANOE SD	2015000016	TIPPECANOE	LAURAMIE		
16	SR25	HWY	CR500E	1200	N		902368502	TIPPECANOE SD	2015000020	TIPPECANOE	WASHING		
17	OLYMPIA	DR	OLYMPIA	630	E		902366899	LAFAYETTE PD	2015000051	TIPPECANOE	WEA		
18	CREASY	LN	SOUTH	200	S		902365614	LAFAYETTE PD	2015000056	TIPPECANOE	FAIRFIELD		
19	PHEASANT RUN	DR				3161	902365615	LAFAYETTE PD	2015000057	TIPPECANOE	WEA		
20	SR43	HWY		1500	N		902368503	TIPPECANOE SD	2015000022	TIPPECANOE	TIPPECANOE		
21	ROUNDTABLE	DR	SHINING ARMOR	100	W		902369921	TIPPECANOE SD	2015000023	TIPPECANOE	WABASH		
22	SR38	HWY				3540	902366900	LAFAYETTE PD	2015000070	TIPPECANOE	FAIRFIELD		
23	BETHEL	DR				3547	902365953	WEST LAFAYETTE PD	2015000017	TIPPECANOE	WABASH		
24	SOUTH	ST	PARK				902365616	LAFAYETTE PD	2015000072	TIPPECANOE	FAIRFIELD		
25	CR200S	RD	DAYTON	180	E		902368504	TIPPECANOE SD	2015000033	TIPPECANOE	SHEFFIELD		
26	SR25	HWY	CR175W	300	W		902368505	TIPPECANOE SD	2015000036	TIPPECANOE	UNION		
27	OLD SR25	HWY	SUGAR CREEK	100	N		902368506	TIPPECANOE SD	2015000037	TIPPECANOE	WASHING		
28	SOUTH RIVER	RD	SHARON CHAPEL	80	W		902368507	TIPPECANOE SD	2015000038	TIPPECANOE	WABASH		
29	OLD SR25	HWY	CR800N	1000	N		902368508	TIPPECANOE SD	2015000039	TIPPECANOE	WASHING		
30	OLD SR25	HWY	CR500E	0	N		902368509	TIPPECANOE SD	2015000040	TIPPECANOE	WASHING		
31	I65	HWY		600	S		902364556	ISP LAFAYETTE 14	201500002045	TIPPECANOE	TIPPECANOE		
32	NORTH RIVER	RD				1980	902368510	TIPPECANOE SD	2015000043	TIPPECANOE	WABASH		
33	COMMERCE	DR				4205	902366244	LAFAYETTE PD	2015000089	TIPPECANOE	FAIRFIELD		
34	SOUTH	ST	SAGAMORE				902365617	LAFAYETTE PD	2015000088	TIPPECANOE	FAIRFIELD		
35	CR50W	RD		300	W	5701	902368511	TIPPECANOE SD	2015000044	TIPPECANOE	TIPPECANOE		
36	SOLDIERS HOME	RD	BROADVIEW	750	S		902365954	WEST LAFAYETTE PD	2015000019	TIPPECANOE	WABASH		
37	FORTUNE	DR				3805	902365618	LAFAYETTE PD	2015000092	TIPPECANOE	FAIRFIELD		
38	SR38	HWY	CREASY				902368952	LAFAYETTE PD	2015000094	TIPPECANOE	FAIRFIELD		
39	GRANT	ST	NORTHWESTERN				902365955	WEST LAFAYETTE PD	2015000020	TIPPECANOE	WABASH		
40	SOUTH	ST	CREASY				902367854	LAFAYETTE PD	2015000100	TIPPECANOE	FAIRFIELD		
41	SOUTH	ST	FAIRINGTON				902365619	LAFAYETTE PD	2015000107	TIPPECANOE	FAIRFIELD		
42	SAGAMORE	PKY	BEECH				902365621	LAFAYETTE PD	2015000114	TIPPECANOE	FAIRFIELD		
43	SOUTH	ST	FAIRINGTON				902365620	LAFAYETTE PD	2015000113	TIPPECANOE	FAIRFIELD		
44	SOUTH	ST	FAIRINGTON				902365622	LAFAYETTE PD	2015000118	TIPPECANOE	FAIRFIELD		
45	VETERANS MEMORIAL	PKY				1803	902365623	LAFAYETTE PD	2015000120	TIPPECANOE	WEA		

Monthly Review Process

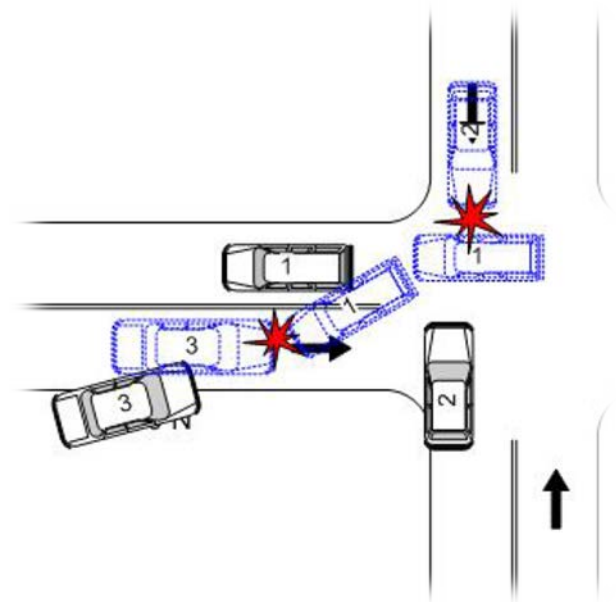
ARIES – Find a Document

Master Record Number from Excel

- County Property Damage
- Investigations

Narrative

Diagram (Support)



Crash Damage Restitution

Traffic Signs

Guardrail

Itemized Invoice

- Time and Material
- Highway Garage Records

Insurance Company

Driver

2014 Crash Restitutions

32 Claims

\$17,866.19 in damages

25 - Traffic Signs

7 - Guardrail



Annual County Crash Analysis

Roadway Segment -

Crash Rate per million vehicle-miles (MVM)

Intersections –

Crash Rate per million entering vehicles (MEV)

2 or more crashes (or one fatal crash)

Critical Crash Rate based on AADT levels and averages specific to Tippecanoe County

Traffic Studies and Investigations

- Multi-Way Stop Study (12-month period)
- Speed Limit Study (2-year minimum)
- Traffic Calming Device Investigation
- Driveway Locations
- Before-and-after Evaluations